



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/090,068	03/01/2002	Torsten Grust	SVL920010034US1	4243
23589	7590	01/07/2008		
HOVEY WILLIAMS LLP 10801 Mastin Blvd., Suite 1000 Overland Park, KS 66210			EXAMINER NGUYEN, CINDY	
			ART UNIT	PAPER NUMBER
			2161	
			MAIL DATE	DELIVERY MODE
			01/07/2008	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/090,068

Applicant(s)

GRUST ET AL.

Examiner

Cindy Nguyen

Art Unit

2161

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 02 January 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-33 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

This is response to communication filed 01/02/07.

### ***Response to Arguments***

Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3, 5, 6, 8-11, 13-16, 18-21, 23-26, 28-31 and 33 are rejected under 35 U.S.C. 102(b) as being anticipated by Raghu et al., "the CORAL Deductive system", VLDB Journal 2, 161-210, 1994 (hereafter Raghu).

Regarding claims 1, 6, 9, 14, 19, 24 and 29, Raghu discloses: A method and a database management system adapted to process queries in a pervasive computing environment and a program product comprising computer readable program code on one or more media said program code being capable of controlling and configuring a computer system having one or more computers to perform the process of :

a. receiving queries in a query language the queries comprising a plurality of query terms (i.e., database query languages such as sql... see page 162, first paragraph and fig. 3, page 172 and page 173, third paragraph);

b. interpreting the queries by associating at least one declarative language function with the query terms (queries written in a declarative language, page 162, 1-3 paragraphs and i.e., the query evaluation system interprets the internal form of the optimized program... see page 173, last paragraph);

c. converting the queries represented by the at least one declarative language function to a plurality of imperative language statement and executing the imperative language statements and executing the imperative language statements (i.e., the CORAL system has been integrated with C++ to support a combination of declarative and imperative programming styles... the CORAL system provides a collection of new C++ classes and a suite of associated member functions... embed CORAL commands in C++ code. C++ can be used in conjunction with the declarative language features of CORAL in two distinct ways: relations can be computed in a declarative style using declarative modules and then manipulated in imperative fashion in extended C++ ... see pages 192-194, section 8 interface with C++).

Regarding claims 2, 10, 15, 20, 25, 30 all the limitations of these claims have been noted in the rejection of claims 1, 9, 14, 19, 24 and 29 above, respectively. In addition, Raghu discloses: comprising converting the query language to an intermediate tree representation corresponding to the at least one declarative language

function associated with the plurality of query terms, and thereafter converting the query to at least one data structure that is interpreted by an imperative language interpreter core to perform the queries (i.e., in addition to performing source-to-source transformations, the rewritten program is stored as a text file, and also is converted into an internal representation that is used by the query evaluation system, the query evaluation system takes as input annotated declarative program (in an internal representation)... the system interprets the internal form and compiled version of CORAL in which a C++ program was generated see page 173, last two paragraphs).

Regarding claims 3, 11, 16, 21, 26, 31 all the limitations of these claims have been noted in the rejection of claims 2, 10, 15, 20, 25 and 30 above, respectively. In addition, Raghu discloses: wherein the declarative language function is identified by a pointer to further code such that the declarative language function is treated as data within the plurality of imperative language statements (see section 8.3, page 195).

Regarding claims 5, 8, 13, 18, 23, 28 and 33 all the limitations of this claim have been noted in the rejection of claims 1, 6, 9, 14, 19, 24 and 29 above, respectively. In addition, Raghu disclose: wherein the imperative language is chosen from the group consisting of C, C++, Java, Modula2, and SmallTalk (i.e., C++ see abstract page 161).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4, 7, 12, 17, 22, 27 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Raghu et al., "the CORAL Deductive system", VLDB Journal 2, 161-210, 1994 (hereafter Raghu) in view of Simon Peyton Jones et al. "Bridging the gulf: a common intermediate language for ML and Haskell", Copyright 1998 ACM (hereafter Simon).

Regarding claims 4, 7, 12, 17, 22, 27 and 32, all the limitations of these claims have been noted in the rejection of claim 1, 6, 9, 14, 19, 24 and 29 above, respectively. However, Raghu didn't disclose: wherein the declarative language is chosen from the group consisting of ML, LISP, and HASKELL. On the other hand, Steele discloses: ML, LISP and HASKELL. On the other hand, Simon discloses: wherein the declarative language is chosen from the group consisting of ML, LISP, and HASKELL. On the other hand, Steele discloses: ML, LISP and HASKELL (see abstract, page 49). Thus, at the time invention was made, it would have been obvious to a person of ordinary skill in the art to include wherein the declarative language is chosen from the group consisting of ML, LISP, and HASKELL. On the other hand, Steele discloses: ML, LISP and HASKELL in the system of Raghu as taught by Simon. The motivation being to

provide the ability to compile as good code as a more direct route turned out to be and identify two alternative language designs and explore the choices they embody.

### *Contact Information*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cindy Nguyen whose telephone number is 571-272-4025. The examiner can normally be reached on 8:30-5:00.

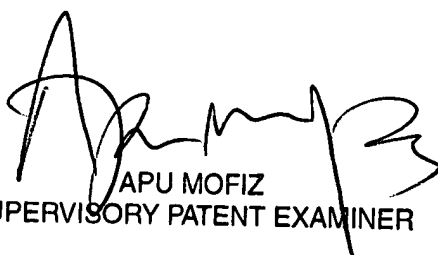
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Apu Mofiz can be reached on 571-272-4080. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Application/Control Number:  
10/090,068  
Art Unit: 2161

Page 7

Cindy Nguyen



APU MOFIZ  
SUPERVISORY PATENT EXAMINER